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WHAT IS CLAIMED IS:

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1. A method of fabricating a semiconductor device, comprising the steps of:

attaching a wafer on a dicing tape;

10 dicing the wafer, thereby forming semiconductor chips; and

separating the semiconductor chips from the dicing tape,

wherein the step of separating comprises the steps of: providing a hollow sheet having at least one
15 aperture corresponding to the semiconductor chips between the semiconductor chips attached on the dicing tape and a porous plate coupled to a vacuum source; sucking the semiconductor chips to the porous plate via the hollow sheet by driving the vacuum source; and separating the
20 dicing tape from the semiconductor chips under a condition where the semiconductor chips are being sucked to the porous plate.

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2. The method as claimed in claim 1, further comprising the step of:

30 further providing a porous film between the hollow sheet and the porous plate.

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3. The method as claimed in claim 1, further comprising the step of:

5 further providing a protective film to protect circuit-formed portions of the semiconductor chips between the semiconductor chips and the porous plate.